



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/550,216	09/22/2005	Kei Karasawa	277747US90PCT	1366
22850	7590	10/17/2007	EXAMINER	
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.				LAFORGIA, CHRISTIAN A
1940 DUKE STREET				ART UNIT
ALEXANDRIA, VA 22314				PAPER NUMBER
				2131
NOTIFICATION DATE		DELIVERY MODE		
10/17/2007		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/550,216	KARASAWA ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Christian La Forgia	2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 26 July 2007.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-18 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 22 September 2005 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All    b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date .  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_ .

## DETAILED ACTION

1. The amendment 26 July 2007 has been noted and made of record.
2. Claims 1-18 have been presented for examination.

### *Response to Arguments*

3. Applicant's arguments regarding the 35 U.S.C. 101 rejection of claim 18 filed 26 July 2007 have been fully considered but they are not persuasive. The Applicant's specification is unclear to the point that one of ordinary skill in the art could reasonably construe that the recording medium is a communication line. Therefore, the rejection is maintained.
4. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.
5. See further rejections below.

### *Claim Rejections - 35 USC § 101*

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claim 7 is rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. The Applicant's claim 7 discloses a device that communicates via the Internet without an IP address. It is unclear to the Examiner how a device that is intended to communicate via the Internet without an IP address. Since it is known that an IP address is required to communicate via the Internet, it is unclear how the cryptographic proxy apparatus is operable.
8. Claim 18 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Page 27, lines 21-25 defined the recording medium as being CD-

ROM, a magnetic disk, or a semiconductor storage device, or a communication line. The Office's current position is that claims involving signals (i.e. communication line) encoded with functional descriptive material do not fall within any of the categories of patentable subject matter set forth in 35 U.S.C. § 101, and such claims are therefore ineligible for patent protection. *See* 1300 OG 142 (November 22, 2005) (in particular, see Annex IV(c)).

***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite. They appear to be a literal translation into English from a foreign document and are unclear. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 1-15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0080827 A1 to Lee, hereinafter Lee, in view of U.S. Patent No. 2005/0169473 A1 to Candelore, hereinafter Candelore.

13. As per claims 1 and 13, Lee teaches a packet cryptographic processing proxy apparatus (Figure 2 [block 100]) connected between the Internet (Figure 2 [block 10]) and a terminal (Figure 2 [blocks 180, 182, 184, 186, 188]), comprising:

cryptographic processing part (Figure 2 [block 160]) which performs cryptographic processing for a received packet which is forwarded from the counterpart apparatus to the terminal or from the terminal to the counterpart apparatus based on the cryptographic communication channel information stored in said cryptographic communication channel information storage part (paragraph 056, i.e. encrypting and decrypting data for the home appliances).

14. Lee does not teach a cryptographic communication channel information storage part which stores cryptographic communication channel information used for establishing a cryptographic communication channel at least for packet communication on the Internet, in packet communication between a counterpart apparatus connected to the Internet and the terminal.

15. Candelore teaches a gateway (Figure 6 [block 400]) or set-top box (Figures 2 [blocks 36, 136], 3 [blocks 236, 136]) that receives encrypted data from the network or content provider (Figure 7 [block 454]) and processes it with respect to the home appliance (Figures 7 [blocks 458, 462, 466], 8, paragraphs 0032, 0058-0062).

16. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a cryptographic communication channel information storage part which stores cryptographic communication channel information used for establishing a cryptographic communication channel at least for packet communication on the Internet, in packet communication between a counterpart apparatus connected to the Internet and the terminal, since Candelore states at paragraphs 0032-0034 that it provides a secure way to transmit signals to a

home and provides the home gateway to format the data in accordance with the appliances specified to use the data.

17. Regarding claim 2, Lee teaches a filter information storage part which stores sending source identification information, sending destination identification information, protocol information indicating a packet communication procedure and processing instruction information indicating whether or not to perform cryptographic processing, as filter information (Figure 2 [block 130], paragraph 0051, i.e. firewalls function by analyzing the source and destination information, along with the protocol information); and

cryptographic processing determination part, which, by referring to said filter information storage part based on filter information in the packet received by the packet cryptographic processing apparatus, determining whether or not to perform cryptographic processing of the received packet by said cryptographic processing means based on the processing instruction information (Figure 2 [blocks 140, 150], paragraphs 0052-0055).

18. Regarding claim 3, Candelore teaches a received packet determination part which determines whether or not a received packet from the counterpart apparatus which is forwarded to the terminal is valid (Figure 5 [blocks 370, 380], paragraph 0055).

19. Regarding claim 4, Candelore teaches wherein said cryptographic communication channel information storage part includes a detachable, tamper-proof device in which at least

part of the cryptographic communication channel information is stored (paragraph 0022, i.e. the use of a smart card).

20. Regarding claim 5, Candelore teaches wherein said cryptographic communication channel information storage part includes a storage medium in which at least part of the cryptographic communication channel information is changeable (paragraph 0043, i.e. using entitlement control messages to update descrambling keys and access criteria).

21. Regarding claim 6, Lee teaches the packet cryptographic processing proxy apparatus (Figure 2 [block 100]) being logically directly connected to a network interface device of the terminal (Figure 2 [block 170], paragraph 0057, i.e. wirelessly connected).

22. Candelore discusses the packet cryptographic processing proxy apparatus (Figures 2 [blocks 36, 136], 3 [blocks 236, 136], 6 [block 400] being logically directly connected to a network interface device of the terminal (Figure 8 [block 530]).

23. Regarding claim 7, Candelore teaches the packet cryptographic processing proxy apparatus being implemented on a device which is connected between the Internet and the terminal and which has no IP address (Figures 2 [blocks 36, 136], 3 [blocks 236, 136], i.e. set-top boxes do not have IP addresses).

24. With regards to claim 8, Candelore teaches a terminal information collection part which collects a part of at least one of the cryptographic communication channel information

(paragraph 0043, i.e. using entitlement control messages to update descrambling keys and access criteria).

25. Lee the filter information and stores the information in said filter information storage part (Figure 2 [block 130], paragraph 0051).

26. Regarding claim 9, Cadelore teaches a packet determination part which determines from a received packet whether or not to agree with the counterpart apparatus on cryptographic communication channel information for establishing a packet communication channel between the counterpart apparatus and the terminal (Figure 5 [blocks 370, 374], paragraph 0055);

a cryptographic communication channel information agreement part which, if the packet determination determines necessity of agreement, makes the agreement and stores the agreed cryptographic communication channel information in said cryptographic communication channel information storage part (paragraph 0043, i.e. using entitlement control messages to ensure agreement with the cryptographic protocols);

a key information setting part which sets key information for performing cryptographic processing of a packet, in the cryptographic communication channel information agreed by said cryptographic communication channel information agreement part, for the terminal (paragraph 0043, i.e. using entitlement control messages to update descrambling keys and access criteria).

27. With regards to claim 10, Cadelore teaches wherein, if determining necessity of agreement on cryptographic communication channel information, said packet determination part determines whether valid cryptographic communication channel information corresponding to

the received packet is stored in said cryptographic communication channel information storage part, causes said key information setting part to set key information in the cryptographic communication channel information for the terminal if the valid cryptographic communication channel information is stored, and causes said cryptographic communication channel information agreement part to make agreement on cryptographic communication channel information if the valid cryptographic communication channel is not stored (paragraph 0043, i.e. using entitlement control messages to update descrambling keys and access criteria).

28. Concerning claim 11, Cadelore teaches wherein, if said packet determination part determines necessity of agreement on the cryptographic communication channel information, and address information in the received packet is stored in said filter information storage part, said packet determination part causes agreement on the key information to be made (paragraph 0043, i.e. using entitlement control messages to update descrambling keys and access criteria).

29. Concerning claim 12, Lee teaches a terminal information acquisition part which detects the terminal (Figure 1 [block 170], paragraph 0057), acquires address information from the terminal and stores the acquired address information in said filter information storage part (Figure 2 [block 130], paragraph 0051).

30. Regarding claim 14, Lee teaches referring to a filter information storage part based on filter information in the received packet, determining whether or not to perform cryptographic processing for the received packet (Figure 2 [block 130], paragraph 0051).

31. Candelore teaches causing the cryptographic processing to be performed if it is determined by the determination that cryptographic processing is to be performed (Figure 5 [blocks 370, 374], paragraph 0055), and causing the received packet to immediately pass or to be discarded if it is determined by the determination that cryptographic processing is not to be performed (Figure 5 [block 380], paragraph 0055).

32. Regarding claim 15, Candelore teaches determining whether or not a received packet requires agreement on cryptographic communication channel information and, if agreement is required, making agreement, for packet communication between a counterpart apparatus connected to the Internet and a terminal, with the counterpart apparatus on cryptographic communication channel information for performing cryptographic processing of a packet transmitted with the counterpart apparatus (Figure 5 [blocks 370, 374], paragraph 0055); setting the agreed cryptographic communication channel information for the terminal (paragraph 0043, i.e. using entitlement control messages to update descrambling keys and access criteria); and if agreement is not required, bypassing or discarding the received packet (Figure 5 [block 380], paragraph 0055).

33. With regards to claim 16, Candelore teaches determining whether valid cryptographic communication channel information corresponding to the received packet is stored in the cryptographic communication channel information storage part (Figure 5 [blocks 370, 374], paragraph 0055);

if the cryptographic communication channel information is stored, setting key information in the cryptographic communication channel information for the terminal (Figure 5 [blocks 370, 374], paragraph 0055); and,

if the cryptographic communication channel information is not stored, making agreement on the cryptographic communication channel information, storing the agreed cryptographic communication channel information in the cryptographic communication channel information storage part as well as setting the agreed cryptographic communication channel information for the terminal (paragraph 0043, i.e. using entitlement control messages to update descrambling keys and access criteria).

34. Concerning claim 17, Candelore teaches if agreement on cryptographic communication channel information for the packet is required (Figure 5 [blocks 370, 374], paragraph 0055); performing the determination about whether valid cryptographic communication channel information is stored in the cryptographic communication channel information storage part (Figure 5 [blocks 370, 374], paragraph 0055).

35. Lee teaches determining first whether address information in the received packet is stored in a filter information storage part (Figure 2 [block 130], paragraph 0051).

36. Regarding claim 18, Candelore teaches a readable recording medium on which a program for causing a computer to perform the packet cryptographic processing method according to any of one Claims 13 to 17 is recorded (paragraph 0065).

***Conclusion***

37. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

38. The following patents are cited to further show the state of the art with respect to home network gateways for managing home appliances, such as:

United States Patent Application Publication No. 2002/0080753 A1 to Lee, which is cited to show a published application that is co-pending to the one that was used to reject the claims.

United States Patent Application Publication No. 2003/0198349 A1 to Aizu et al., which is cited to show a communication device that stores a secret key to be used in the authentication and encryption of communication with respect to home appliances.

United States Patent Application Publication No. 2005/0169288 A1 to Kamiwada et al., which is cited to show a home network gateway that manages security for the home appliances.

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (571) 272-3792. The examiner can normally be reached on Monday thru Thursday 7-5.

40. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

41. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christian LaForgia  
Patent Examiner  
Art Unit 2131

clf

A handwritten signature in black ink, appearing to read "CLF", is positioned above the typed name and below the typed identifier "clf".